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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,090	03/31/2004	Raffaele Fina	1.G164.202DIV	5654

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CASE POSTALE 375
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SWITZERLAND

EXAMINER

HINZE, LEO T

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/813,090	FINA, RAFFAELE	
	Examiner	Art Unit	
	Leo T. Hinze	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/130,637.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2854

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9-11, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Germann, US 5,282,417 (Germann) in view of Cushner et al., US 5,804,353 (Cushner).

- a. Regarding claim 9:

Germann teaches a rotary printing machine comprising an impression cylinder (1, Fig. 1), a plate cylinder (2, Fig. 1) contacting the impression cylinder and at least one inking cylinder (10, Fig. 1) with an associated ink duct (20, 21, 22, Fig. 1) for inking the plate cylinder either directly or indirectly, wherein the inking cylinder is formed of a cylinder carrying at least one inking plate around its circumference, wherein said plate has a substantially cylindrical form thus defining an inner central area. Germann is silent as to the specific details of the inking plate. Germann does teach that the inking cylinder 10 can preferably carry plates consisting of a somewhat elastic material, so called flexoplates, which are suitable for both direct and indirect inking (col. 4, lines 25-30).

Art Unit: 2854

Germann does not teach said inking plate being formed of at least a base plate having an outer major surface to be directed away from the central area and polymer material defining an outer layer of deposited material which is deposited directly or indirectly on said base plate over a majority of the outer surface of the base plate, and wherein exclusively the outer layer of the inking plate is cut so as to define ink transporting relief surfaces having limits corresponding to the outlines of surfaces to be inked on the plate cylinder.

Cushner teaches an inking plate, wherein said plate has a substantially cylindrical form ("cylindrical form", col. 4, line 30) thus defining an inner central area, said inking plate being formed of at least a base plate ("flexible support", col. 3, line 35) having an outer major surface to be directed away from the central area and polymer material defining an outer layer of deposited material ("reinforced elastomeric top layer", col. 3, lines 37-38) which is deposited directly or indirectly ("spraying", col. 4, line 24) on said base plate over a majority of the outer surface of the base plate, and wherein exclusively the outer layer of the inking plate is cut ("relief pattern... formed only in the top layer", col. 13, lines 10-12) so as to define ink transporting relief surfaces having limits corresponding to the outlines of surfaces to be inked. Such plates are easier and faster to manufacture than prior art plates (col. 1, lines 42-42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the inking plates of Germann such that said inking plate being formed of at least a base plate having an outer major surface to be directed away from the central area and polymer material defining an outer layer of deposited material which is deposited directly or indirectly on said base plate over a majority of the outer surface of the base plate, and wherein exclusively the outer

Art Unit: 2854

layer of the inking plate is cut so as to define ink transporting relief surfaces having limits corresponding to the outlines of surfaces to be inked on the plate cylinder, because Cushner teaches that such inking plates are easier and faster to manufacture than prior art plates.

b. Regarding claim 10, the combination of Germann and Cushner teaches all that is claimed as discussed in the rejection of claim 9 above. Cushner also teaches wherein the inking plate further comprises another layer of polymer material defining an inner layer of deposited material which is interposed between the base plate and the outer layer ("elastomeric intermediate layer", col. 3, line 36).

c. Regarding claim 11, the combination of Germann and Cushner teaches all that is claimed as discussed in the rejection of claim 9 above. Cushner also teaches wherein the inking plate further comprises a layer of adhesive which is interposed between the base plate and the layer of polymer material ("thin adhesive layer", col. 18, line 9).

d. Regarding claim 16, the combination of Germann and Cushner teaches all that is claimed as discussed in the rejection of claim 9 above. Cushner also teaches the cutting of the deposited material occurs when the base plate is held in a cylindrical form so as to permit mounting on the cylinder without substantial deformation, from an as-cut state, of the base plate or the deposited material (col. 4, lines 38-44).

e. Regarding claim 18, the combination of Germann and Cushner teaches all that is claimed as discussed in the rejection of claim 9 above. Germann also teaches wherein the machine is an intaglio printing machine (col. 1, line 10).

Art Unit: 2854

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Germann in view of Cushner as applied to claim 9 above, and further in view of Fan et al., US 5,607,814 (Fan) and Recchia et al., US 3,951,657 (Recchia).

The combination of Germann and Cushner teaches all that is claimed as discussed in the rejection of claim 9 above, except wherein the polymer material is a PVC composition material that has a shore D hardness of 50.

Fan teaches a printing plate that is sensitive to laser radiation (col. 1, lines 6-12) and that has polyvinyl chloride in the IR sensitive layer (col. 6, line 26). Such a material composition provides printing plates with known good printing characteristics that can be produced quickly and economically by using digital imaging means (col. 2, lines 43-45).

Recchia teaches a process for making a printing plate (col. 9, line 9) that has a hardness between Shore A 50 and Shore D 60. Recchia teaches that plates with a Shore hardness in this range offer excellent printing characteristics and resistance to wear (col. 2, lines 16-18).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Germann such that the polymer material is PVC, because Fan teaches that PVC provides printing plates with known good printing characteristics that can be produced quickly and economically by using digital imaging means.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally further modify Germann such that the hardness of the material is Shore D 50, because Recchia teaches that printing plates having this hardness offer excellent printing characteristics and resistance to wear.

Art Unit: 2854

4. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Germann in view of Cushner as applied to claim 10 above, and further in view of Fan, Recchia, and Allen, US 4,264,705 (Allen).

a. Regarding claim 13:

The combination of Germann and Cushner teaches all that is claimed as discussed in the rejection of claim 10 above, except wherein the outer layer is softer than the inner layer.

Allen teaches that while the backing layer of multiplayer printing plates is usually of lower hardness than the printing layer to allow the plate to conform better to irregular surfaces, it is sometimes advantageous to have a backing that is harder than the printing layer, depending upon a variety of factors (col. 2, lines 5-20). Allen teaches that often harder backing material gives better print quality than soft backing material since the plate has less tendency to deform from shear forces developed during high speed printing (col. 2, lines 13-17).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Germann such that outer layer is softer than the inner layer, because Allen teaches that often harder backing material gives better print quality than soft backing material since the plate has less tendency to deform from shear forces developed during high speed printing.

b. Regarding claim 14:

The combination of Germann and Cushner teaches all that is claimed as discussed in the rejection of claim 13 above, except the inner layer had a Shore D hardness of 50 and the outer layer a Shore A hardness of 70.

Art Unit: 2854

Allen teaches that while the backing layer of multiplayer printing plates is usually of lower hardness than the printing layer to allow the plate to conform better to irregular surfaces, it is sometimes advantageous to have a backing that is harder than the printing layer, depending upon a variety of factors (col. 2, lines 5-20). Allen teaches a range of hardness for the layers between Shore A 30 and 90 (col. 8, line 13). Allen also teaches an example where the printing layer has a hardness of Shore A 50 and the backing layer has a hardness of Shore A 90.

It has been held that optimization of ranges is not sufficient to prove patentability of an invention over the prior art. MPEP § 2144.05 (II).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Germann such that the inner layer had a Shore D hardness of 50 and the outer layer a Shore A hardness of 70 through the course of routine experimentation, because one having ordinary skill would recognize that the specific hardness needed will vary depending on the exact printing conditions, and these values are within the ranges taught by Allen and Recchia as suitable for flexographic printing plates and backing layers.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Germann in view of Cushner as applied to claim 9 above, and further in view of Fan.

The combination of Germann and Cushner teaches all that is claimed as discussed in the rejection of claim 9 above, except the polymer material is made of PVC.

Fan teaches a flexographic printing plate that is sensitive to laser radiation (col. 1, lines 6-12) and that has polyvinyl chloride in the IR sensitive layer (col. 6, line 26). Such a material composition

Art Unit: 2854

provides flexographic printing plates with known good printing characteristics that can be produced quickly and economically by using digital imaging means (col. 2, lines 43-45).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Germann such that the polymer material is PVC, because Fan teaches that PVC provides flexographic printing plates with known good printing characteristics that can be produced quickly and economically by using digital imaging means.

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Germann in view of Cushner as applied to claim 9 above, and further in view of Koelsch, US 6,318,261 (Koelsch).

The combination of Germann and Cushner teaches all that is claimed as discussed in the rejection of claim 9 above, except wherein the base plate comprises two ends for clamping the inking plate onto the inking cylinder and wherein polymer material is not deposited on the said two ends of the base plate. Both Germann and Cushner are silent as to the manner of attaching the plate to a cylinder.

Koelsch teaches a cylinder (24, Fig. 2) with a slot (28, Fig. 2) and means for clamping (70, Fig. 4) at least one flexographic plate (col. 1, line 6). Such a means for clamping offers improved strength and rigidity and does not interfere with the flexographic printing process (col. 2, lines 19-33).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Germann to include two ends for clamping the inking plate onto the inking cylinder and wherein polymer material is not deposited on the said two ends of the base plate,

Art Unit: 2854

because Koelsch teaches that such a cylinder and clamping means offer improved strength and rigidity and does not interfere with the flexographic printing process.

Response to Arguments

7. Applicant's arguments with respect to claims 9-18 have been considered but are moot in view of the new ground(s) of rejection.

8. Regarding applicant's arguments on page 7 regarding Cushner and alleged differences between flexographic and intaglio plates, specifically that the inking plate of the present invention is used in a certain manner, structural features specific to intaglio plates and absent from flexographic plates must be claimed to establish patentability over the prior art. While features of an apparatus may be recited either structurally or functionally, claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. MPEP § 2114.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the

Art Unit: 2854

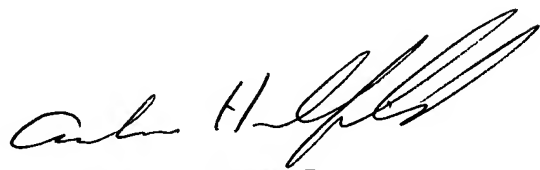
THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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